UNITED STATES DEPARTMENT OF INTERIOR
BUREAU OF LAND MANAGEMENT

ENVIRONMENTAL ASSESSMENT
for
Timbered Rock Rehabilitation/Stabilization Project

EA Number OR-110-03-08

Proposed Action Title/Type
Rehabilitation/stabilization of the Timbered Rock Wildfire Lands

Location of Proposed Action T32S., R1E., Section 3,4,5,7,8,9,10,11,15,17,19,21,29,60,31,and 33, T32S., R1W., Section 1,11,12,13,14,23,24,25,26, and 35, T33S., R1E., Sections 3,4,5,6,7,8,9,10,15, and 17, T33S., R1W., Section1, Will. Mer. (See Map)

BLM Office
Medford District Office, Butte Falls Resource Area.

Tiering
The purpose of this Environmental Assessment (EA) is to assist in the decision-making process by assessing the environmental and human effects resulting from implementing the proposed action and/or alternatives. The EA will also assist in determining if an Environmental Impact Statement (EIS) needs to be prepared or if a Finding of No Significant Impact (FONSI) is appropriate.

This EA tiers to: (1) the *Final EIS and Record of Decision (ROD)* dated June, 1995 for the *Medford District Resource Management Plan* dated October, 1994; and (2) the *Final Supplemental EIS on Management of Habitat for Late-Successional and Old-Growth Forest Related Species Within the Range of the Northern Spotted Owl* dated February, 1994; and (3) the *Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl* and its Attachment A, entitled the *Standards and Guidelines for Management of Habitat for Late-Successional and Old-Growth Forest Related Species Within the Range of the Northern Spotted Owl* dated April 13, 1994.

NEED FOR THE PROPOSED ACTION

A wildfire in T31S., R1E., Sections 28,29,31,32,33,and 34, T32S., R1E., Section 2,3,4,5,6,7,8,9, 10,11,14,15,16,17,18,19,20,21,22,28,29,30,31,32,33,and 34, T32S., R1W., Section 1,11,12,13,14,23,24,25,26,35,and 36, T33S., R1E., Sections 3,4,5,6,7,8,9,10,15,16, and 17, T33S., R1W., Section1 and 12, Will. Mer. (See Map) burned 24,512 acres of land on July 13 through

September 14, 2002. Of the 24,512 acres burned, the Butte Falls Resource Area, Medford District, Bureau of Land Management manage 11,754 acres. The proposed action is for emergency rehabilitation on 11,754 acres of federal land. All of the lands burned in the Timbered Rock under BLM management are classified as Late Successional Reserve (LSR). These lands were designated as areas in which Old Growth Characteristics were to be developed and subsequent Old Growth Species habitat was the primary concern for uses on the lands. This EA is being proposed in order to develop an approved rehabilitation plan and secure funding for the completion of work in the fall prior to winter rains. If conifer salvage is undertaken a separate EA for that activity will be prepared.

Rehabilitation/stabilization activities are needed on 11,754 acres of federal land to reduce additional site deterioration and repair site damage resulting from the fire. Surface runoff, soil erosion, soil productivity, and subsequent sedimentation and degradation of local stream channels are limited and reduced by unburned areas with intact tree canopies. Conditions created by the fire and utilization of fire suppression equipment increased the risk of noxious weeds becoming established within the fire area. The Timbered Rock Fire resulted in some survey and manage and threatened species needing to be monitored to determine the fires= effect upon them and their habitat. Planting of conifers and hardwoods is needed to reinstate the vegetative communities occupying the area prior to the fire. Bare soil areas created by burned vegetation and mechanically disturbed areas from fire suppression activities are at the most risk for potential erosion. These areas are not expected to require some form of surface protection and rehabilitation for the first 1-3 years, after which risk levels for soil erosion are expected to decline as the areas revegetate and stabilize. Riparian work is needed to restore those areas and fisheries work is needed to restore and enhance fish populations. Seeding of native seed and sterile non-native species is needed to reduce sedimentation and runoff from the exposed soils. Some culvert work will be required to reduce road failures and soil movement with winter weather.

Within the fire area, there are an additional 607 acres of federal land managed through the Army Corp of Engineers, a memorandum of understanding will be completed between the Corp of Engineers and the BLM so that needed stabilization and rehabilitation projects can be completed through this Environmental Assessment. The proposed work will be similar in nature to the work that the BLM is proposing and will need to be complete in a similar time frame to provide stabilization and rehabilitation in the fire area. Funding for the work on the Corp managed lands will be provided from the Corp and not from the Emergency Stabilization and Rehabilitation Funds of the Bureau of Land Management.

Hydrology

The Elk Creek Watershed consists of 85,362 acres and is a tributary to the Rogue River. There are numerous tributaries to Elk Creek ranging from first to fifth order or higher in size. Six sub watersheds have been delineated within this watershed.

Average annual precipitation varies by location within the watershed. Expected annual precipitation in the watershed ranges from less than 35 inches to more than 60 inches. On average, the Elk Creek Watershed receives about 44 inches of precipitation each year. The stream flow regime is similar to the precipitation pattern. However, runoff generally lags behind precipitation by about a month.

Historic extreme high flows have been produced by rain-on-snow events where warm rains have melted the snow pack thereby producing large amounts of runoff. The range in flows from low to high is very large in this watershed. The largest peak flow of record at Elk Creek near Trail occurred in December 1964 at a flow rate of 19,200 cfs. Later that year, the discharge dropped to 0.40 cfs. The lowest mean daily flow of record occurred in September of 1994 when the discharge was 0.12 cfs.

The majority of soils in the Elk Creek basin are composed of a large proportion of fine-grained material. The soils are easily eroded, and since many of the slopes in the basin are steep, most of the basin has high surface erosion potential. The soils are also subject to compaction and puddle if heavy machinery is used when the soils are wet. Erosion of the soil surface is a major concern where management activities or large disturbances, such as fire, destroy the duff and litter layer.

The Timbered Rock fire perimeter includes 27,060 acres within the Elk Creek Watershed. Within the perimeter of the fire, approximately 4,100 acres was rated at a high burn severity, and approximately 6,550 acres was rated at a moderate burn severity. The following table shows approximate burn severities for the entire watershed as well as BLM lands.

	Total Fire Perimeter	High	Moderate	Low	Unburned
Elk Creek 5th	27,060	4,108	6,549	8,476	7,927
BLM	11,754	1,300	2,404	4,235	3,815
% Elk Creek	32%	4.8%	7.7%	9.9%	10.7%
% BLM	43.4%	4.8%	8.8%	15.7%	14.1%

Water Quality

Water quality in the Elk Creek watershed varies spatially and temporally. During the winter months, streams generally are of good quality. Increased levels of turbidity and stream flow are common in response to storm events but are usually of short duration and are a part of the natural functioning of the watershed. During the summer, stream temperatures increase to detrimental levels in a number of streams.

PROPOSED ACTION AND ALTERNATIVES

Proposed Action:

Tree Planting

Conifer trees, primarily ponderosa pine trees and Douglas-fir would be planted on an 10 ft. x 10 ft. spacing, which would result in 435 trees per acre being planted. Conifers would only be planted in

burned areas upon which conifers previously grew prior to the fire. Hardwoods, such as big leaf maple and alder, would be planted in riparian areas along streams to rehab those areas.

Grazing

Livestock Management Livestock grazing has been cancelled for the 2003 grazing season. This will allow soils to stabilize through re-establishment of young conifers and oaks, several brush species, and grasses and forbs. It has not been determined whether livestock grazing will be allowed in 2004. Reasons for not allowing livestock grazing during the second year following the fire might be because silviculture rehabilitation efforts have not proceeded as quickly as expected, that other issues have arisen that were not addressed in earlier documents, or Boise (as the other major landholder) has management concerns that have not been met. A reason for allowing grazing in 2004 might be to reduce competition for moisture between young conifers and cedars with grasses, brush, and forbs before those species become more dominant in the landscape.

Noxious Weeds

Fire lines have been re-seeded under the immediate fire rehab effort. Funding and contracts have already been appropriated for the treatment of weeds in 2003. There are no plans to treat any noxious weeds in the interior of the Timbered Rock Fire, as none are known to exist. The fire area will be surveyed for noxious weeds, as well as threatened and endangered plants, in future years, and they will be treated accordingly at that time.

To eliminate or reduce the threat of noxious weed expansion, search for and treat noxious weed species (see attached list). In order to kill the entire root system as well as the above ground portion, RODEO[7] will be applied by backpack sprayer to individual plants. Applicators (with state applicators licenses) will apply RODEO[7] to annual and non-woody species at a 1.5% solution. Woody species like Scotch broom will receive applications at a 50% rate to the cut stems

Soil Erosion

To reduce runoff and soil erosion: All intensely burned areas with slopes greater than 35% should be grass seeded with a native seed mix. These areas are critical to establishing vegetation and surface protection within the first 1-3 years. Apply mulching (straw, native materials, hydro-mulch, etc.) to extremely steep (greater than 65%) slopes and road cutbanks and fillslopes in these intensely burned areas. Apply slow release high nitrogen fertilizer after 3-5 years to reduce long-term soil productivity losses on approximately 300 acres to aid the recover of both conifer and other native plant species. Subsequent applications may be needed in the long term (greater than 10 years).

On all tractor lines with slopes greater than 20% or adjacent to stream channels, water bar, grass seed with erosion control mix, and straw mulch. All unpurified roads, jeep roads, old skidding roads, and firelines opened for suppression or access activities should be properly weatherized and adequately blocked to prevent winter use.

Running surface, ditch-lines and culvert catchment areas along all roads will also need to be re- graded and cleaned to re-establish adequate drainage in areas where debris from the fire and the suppression

activities has fallen onto the roadway. Fire line stabilization was completed with fire suppression activities and personnel.

Stream Channel Stability

To reduce the potential for debris flows and subsequent down cutting and stream bank de-stabilization: Provide structure in the streams channel utilizing natural materials on site (e.g. logs, brush and /or rocks) or construct sediment check dams where appropriate. Maximum spacing should be 100 feet or less depending on stream gradient. These debris dams are expected to provide stream structure, reduce water flow energy, and trap some of the sediment in burned out reaches and help protect down stream structures.

All road draw crossings in high intensity burn areas (little or no vegetation remaining) and have stream gradients greater than 7 % should be measured for compliance with 100-year flood standard. All culverts not meeting the standard need be replaced with a resized culvert that meets the standard. This is very important to minimizing large inputs of sediments into lower gradient fish bearing streams from plugged culverts.

Large Wood Placement

The Butte Falls Resource Area has identified the following streams within the Timbered Rock Fire to add large wood to trap sediment and stabilize channels in anticipation of the increased sediment loads: Hawk, Sugar pine, Timber, Flat, Middle, Elk, and West Branch Elk Creeks and six unnamed tributaries within the Elk Creek basin.

Dead trees would be felled into the stream to create log jams which would trap sediment and other debris which is expected to come down this winter and spring during periods of high flow. Only dead trees would be felled; trees, which still show any amount of green canopy intact, would not be cut but would be assessed at a later date for possible falling into the creeks. An excavator would place hazard trees that were cut during fire suppression activities and are currently stockpiled along the road into the stream. The equipment would not be allowed to operate outside of the road prism but would place the trees directly from the road into the creek. Trees that are felled but end up straddling the banks above the stream would be bucked so that a portion of the logs will lie within the stream banks. No yarding or skidding of trees would be allowed except upon existing roads.

Known areas with threatened and / or survey and manage species would be monitored to determine the fires effect upon them and their response to the fire. Funding to monitor threatened and / or survey and manage species would be supplied from operational sources and not Emergency Rehabilitation and Stabilization funding.

Native Species Seed Collection and Cultivation

Native plant seeding is needed to help reestablish native vegetation in severely burned areas and reduce surface erosion and sedimentation into streams. The proposed project would collect seed of riparian species and grow-out the plants at local nurseries for planting in severely burned riparian areas. Native grass species and small amounts of native forbs would be grown-out in federal nurseries or under contract with grass seed growers and applied where revegetation of disturbed areas is necessary to reduce soil erosion and restrict the spread or introduction of noxious weeds. Areas targeted would be intensely burned areas, grass meadow communities and along roadways. Mycorrhizal fungi inoculums would be added to improve the vigor and growth of newly germinated grass, forbs, hardwood and conifer seed and seedlings.

A woodland mix of with native grass species would be applied on severely burned forested areas identified on the fire severity map and field verified to help reestablish the native grass component and to reduce runoff and soil erosion. Also, seeding would occur along roadside fill slopes burned in the wildfire to reduce the spread of noxious weeds and non-native vegetation. These areas would be lightly seeded with native woodland grasses such as Blue Wild rye and California Brome at approximately 5 to 10 lbs /acre to establish a native grass component.

A meadow mix of native grass and forbs species would be applied on meadow areas and other non-timbered lands where brush and hardwoods dominated the vegetative community to enhance the native grass component and reduce the dominance of non-native and weed species that occur on these sites. The areas would be seed with a native grass mix of Lemmon=s needle grass, Romer=s fescue, Western fescue, California fescue, and June grass, as appropriate, at the rate of approximately 10 lbs/acre.

Grass seeding with native species and non-native species may occur on selected sites such as portions of tractor constructed firelines, steep slopes, steeply incised stream channels and other road and culvert projects within the fire area where ground disturbance occurs. Non-native sterile wheat or cereal barley may be added to the native seed mix for application on highly disturbed sites or where quick establishment of vegetation is necessary to reduce soil erosion. Perennial native grasses generally take 2 years for establishment. Cereal barley was included with other native grass species in the emergency rehab seed mix on tractor constructed firelines and campsites. Rehabilitation work, including seeding, was completed immediately following the fire, but additional grass seeding may occur to enhance soil protection and stability. Grass seed was hand broadcast at the rate of approximately 20 pounds per acre on firelines and camp areas and would be applied in the same manner and rate on tractor lines that were over-looked, slumps, or on any newly disturbed areas. These areas are critical for establishing vegetation and protection within the 1st and 2nd year.

Mycorrhizal inoculums would be applied on intensely burned forested areas; constructed fire lines or other ground disturbed areas and staging areas where the organic layer has been removed. Two types of mycorrhizal inoculums would be applied. One is designed to benefit grass and forbs communities and the other is designed for hardwood and conifer dominated areas. The inoculums contain 3 mycorrhizal

fungi that are a natural microbial component of the system and improve the vigor and growth of newly germinated grass, forbs, hardwood and conifer seed and seedlings.

Riparian Reserves Planting

The Timbered Rock fire includes numerous riparian reserve areas classified as seasonally intermittent or perennial streams. Stabilization planting is necessary in places along streams that were severely burned or lack the potential to respond quickly by resprouting or germinating new riparian plants, and where dozer constructed lines disturbed the stream channel and riparian vegetation. A combination of hardwoods, conifers and grasses/forbs would be planted to reduce erosion and reestablish native species.

Seed would be collected for riparian hardwood and brush species in the fall of 2003 and 2004 for grow-out. Riparian hardwood and brush species would be planted in severely burned riparian areas to speed the recovery of those areas.

No Action Alternative

Under this alternative no Rehabilitation / Stabilization activities would occur in the Timbered Rock Fire Area.

ENVIRONMENTAL EFFECTS

Introduction

Only substantive site-specific environmental changes that would result from implementing the proposed action or alternatives are discussed here. If an ecological component is not discussed, it should be assumed that the resource specialists have considered effects to the component and found the proposed action or alternatives would have minimal or no effects. Similarly, unless addressed specifically, the following were found not to be affected by the proposed action or alternatives: air quality; areas of critical environmental concern (ACEC); cultural or historical resources; Native American religious sites; prime or unique farmlands; floodplains; endangered, threatened or sensitive plant, animal or fish species; water quality; wetlands/riparian zones; wild and scenic rivers; and wilderness areas. In addition, hazardous waste or material are not directly involved in the proposed action or alternatives.

General or Atypical@ effects from projects similar in nature to the proposed action or alternatives are also described in the EISs and plans this EA is tiered to. For this project, the occurrence of the fire is the cause of the rehabilitation/stabilization proposal not the described proposed action.

Description of the Affected Environment:

Fire Effects on Soils

Surface runoff, soil erosion both colluvial and alluvial, soil productivity, and sedimentation with potential degradation of local stream channels are the dominant issues relative to the soils and aquatic habitat within this wildfire area. Exposed soil areas created by high intensity fire (approximately 1300 acres on BLM

lands) with little or no remaining vegetation, little or no surface organic matter, and mechanically disturbed areas (tractor firelines, safety zones, newly opened roads, etc) from the fire suppression activities are at the most risk for potential erosion and productivity losses. These areas are expected to require some form of surface protection and erosion control structures for the first 1-3 years, after which risk levels for soil erosion are expected to decline as the areas re-vegetate and the soils stabilize. Soil productivity losses are expected to be long term (greater than 10 years) as surface organic matter both fine and coarse were volatilized. This is expected to create a period (5-20+ years) where there will be a low availability of soil nutrients especially nitrogen in these intensely burned areas.
Intensely burned areas with dissecting stream channel gradients greater than 7% are at a high risk for large amounts of material (soil and debris flows) in the next several years. Soil, rock and debris that was de-stabilized from the fire will be deposited in stream channels from both alluvial and colluvial action. Draw and stream crossings with road fills and with undersized or non functioning culverts (CMPs) are at an extreme risk for plugging which can cause damage to CMPs, fillslopes, create down stream channel scouring, and deposition of large amounts of sediments in lower gradient fish bearing streams.

Barricaded roads, spurs roads, and jeep roads that haven not been maintained and were opened up and used for fire access, and/or roads and fillslopes that were previously overgrown with vegetation that was burned off in the fire will now be at a higher risk for erosion. Designed drainage structures (water bars, water dips, out sloping, etc) and stabilizing vegetation on these roads are now not properly functioning to prevent erosion and will increase the long term sedimentation potential in local stream channels.

Fire Issues affecting hydrology and water quality
Soils, vegetation, and litter are critical to the functioning of hydrologic process (Robichaud, 5). When a precipitation event follows a large, moderate- to high-burn severity fire, impacts include increased runoff, peak flows, and sediment delivery to streams that can affect fish populations and their habitat (Robichaud, 6).

The Timbered Rock fire burned about 44% of the Flat Creek drainage at high and moderate severity levels. The Middle Creek drainage has a moderate to high burn severity over 75.8% of its area and leaving only about 7% of this drainage unburned. The Timbered Creek drainage had 38.4% of its area that burnt at a high or moderate intensity. This fire has increased open areas considerably by removing overstory canopy, as well as consuming litter, duff, and woody debris. This has put the stream channels in these drainages at a very high risk for erosion, debris flows, and subsequent channel erosion. The magnitude of these effects depends heavily on the timing, intensity, and duration of winter storms especially in the first year of recovery, with impacts tapering off throughout the recovery period.

Vegetation
Plant Vegetation Communities
This report uses the vegetative series and associations described in a Field Guide to the Forested Plant Associations of Southwest Oregon, USDA, Forest Service, Pacific Northwest Region, September 1996. Three plant series occurred within the perimeter of the fire; the Oregon White Oak Series, the Ponderosa Pine Series, and the Douglas-fir Series. These plant series are located within the fire area on

the valley floor and lower foothills and many times surround open meadows. The Oregon White Oak Series includes the Oregon White Oak-Douglas-Fir/Poison Oak association and the Oregon White Oak/Hedgehog Dogtail association. The dominant species include White Oak (*Quercus garryana*) and Black Oak (*Quercus kellogii*) with under story of Poison oak, Buckbrush (*Ceanothus cuneatus*), and Deerbrush (*Ceanothus integerimus*), Conmmon *snowberry (Symphorocarpus mollis*), native grasses consisting of Western fescue (*Festuca occidentalis)*, California fescue (*Festuca californica*), Bluegrass (*Poa scabrella*), Lemmon=s needlegrass (*Achnetherum lemmonii*), and California oatgrass (*Danthonia californica*). Many non-native grass and forbs dominate the community such as Hedgehog Dogtail (*Cynosurus echinatus*), Brome (*Bromus tectorum*), and Medusahead (*Taeniatherum caput-medusae*).

The Ponderosa Pine series is comprised of two associations, the Ponderosa Pine and Douglas-fir association and the Ponderosa Pine California Black Oak association. Shrub components include Deerbrush, Snowberry, Poison Oak and Hairy honeysuckle (Lonicera hispidula). Forbs and grasses are dominated by California fescue (*Festuca californica*), California oatgrass (*Danthonia californica)* Woodland tarweed (*Madia mariodes),* and Mountain sweet-root *Osmarhiza chilensis)* and the non-native grasses.

The Douglas-fir Series is comprised of 21 associations of which only one occurs within the fire area. Douglas -fir dominates in the over-story with a secondary component of Ponderosa Pine and Sugar Pine. The Shrub component is comprised primarily of Poison oak, Piper=s Oregon grape, Creeping Snowberry, Deerbrush and Creambush ocean-spray along with a diverse forbs component..
Open meadows occur within the fire area where grasses and forbs are the climax community. The principal native grass species consist of Bluegrass (*Poa scabrella*), Lemmon=s needlegrass (*Achnetherum lemmonii*), and California oatgrass (*Danthonia californica*). Many non-native grass and forbs dominate the community such as Hedgehog Dogtail (*Cynosurus echinatus*), Brome (*Bromus tectorum*), and Medusahead (*Taeniatherum caput-medusae*).

The chaparral community, although not a plant association, is a seral stage, which commonly develops after a few years of a disturbance, and before the dominant plant associates begin to differentiate and express dominance. The most representative species are madrone, blackoak, buckbrush and deerbrush ceanothus, poison oak and manzanita where Douglas-fir or Ponderosa pine is lacking in the over-story.

Grazing
Livestock Management For all practical purposes, the entire Flat Creek Allotment was consumed in the Timbered Rock Fire. The total allotment is 25,975 acres. The BLM portion is 12,141 acres. The AUM=S (Animal Unit Months) authorized in the Flat Creek Allotment is 328. Boise owns approximately 9,674 acres in the Flat Creek Allotment. They too have cancelled grazing for 2003, but have not yet made any decision about 2004.

Noxious Weeds a very small portion of the public lands consumed by the Timbered Rock Fire were occupied by noxious weeds. Within the portion of the public lands administered by the Corps of

Engineers, there are some areas of Yellow Star Thistle. A few Scotch boom plants were known to exist on the western fringes of the burn, but they may have been consumed in the fire.

Riparian
The wildfire effectively consumed all or significant portions of the above ground biomass that previously provided protection of the soils from rain events by canopy interception, humus and debris absorption, a micro-organism bank, soil protection, etc.

The ecology of local grass and forbs communities has changed. Non-native grasses such as Hedgehog Dogtail (*Cynosurus echinatus*), Brome (*Bromus tectorum*), and Medusahead (*Taeniatherum caput-medusae)* have invaded and dominate grassland meadows and the under-story vegetative community and replaced native grass such as Lemmon=s needlegrass and California oatgrass. Native grasses, once abundant in the forest community are diminishing as noxious weeds and non-native species out-compete local native species, impede the re-establishment of native vegetation on the site and remain a dominant grass component years later. In the past species seeded along road fill slopes were non-native species such as perennial rye (*Lolium perenne*), tall fescue (*Festuca arundacea*) and orchard grass (*Dactylis glomerata*). The colonization and expansion of non-native species is expected to continue at a faster rate after the wildfire because little competition exists and shade is absent in most areas.

Wildlife
Northern Spotted Owl - federal and state listed threatened.

Of 11,750 BLM acres within the burn, 3,442 were classified as nesting, and 2,434 were roosting/foraging, for a total of 5,876 acres of Asuitable@ owl habitat. We are awaiting delivery of new air photos of the burn area. Due to the relative large size of the wildfire, estimates of burn severity and how much habitat was altered are approximate, based on field visits and satellite imagery. From the preliminary (not ground truthed) imagery, 373 acres were high burn severity, 819 were moderate, 2,216 were low, and 2,467 were unburned. These numbers are to be taken with a large grain of salt, until new air photos become available. Roughly 760 acres were downgraded from suitable to nonsuitable. Another 2,215 acres were downgraded from suitable to dispersal habitat.

There were 18 historic owl pair cores on the BLM portions of the fire, with another 3 on USFS and one on private timberland. Of the 18 BLM sites, 13 were currently occupied and had produced young in at least one of the past three years. From preliminary visits, four cores burned with high severity, two with moderate severity, and the remainder were an underburn where most of the trees seem to have survived. In most cores, the ground and shrub layers burned hot. In the hot areas, all trees were killed. In the low intensity areas, some trees were killed, but most seem to have survived the scorching.

LSR 222 (Upper Rogue River - Elk Creek) contains 21,500 BLM managed acres. 12,000 of that burned (56% of the LSR). The LSR does not include non-federal lands or Corps of Engineers. An additional 7 historic owl sites (6 active) within the LSR did not burn. What is unique in this situation is that

so many contiguous owl sites burned, severely disrupting the prey base. If an owl pair extends its foraging to the adjacent territory, the prey base of the next territory has also been impacted.

Construction of firelines (two to three dozer blades wide) altered some suitable habitat. On 24, 25, 26 July the fire jumped containment lines each afternoon, explosively doubled in size, and burned through another three owl cores each day. Helitorch back burns on several days altered several hundred acres. There is a high probability that some adult owls were not able to fly out of the fire=s path. There is a high probability that most of the young of the year did not escape the fire. Since this fire occurred earlier in the summer than most wildfires, juvenile owls had not been flying for as long as would have been the case with a more typical mid-August ignition. It is presumed that they would have been less equipped to escape an afternoon firestorm.

Banding of individual owls in the fire area began in 1985, with a Masters student (Kathy Nickell) doing radio telemetry on one owl site. From 1986 through 1989, the OSU Co-Op Unit (Frank Wagner) monitored all the sites in the burn area as part of the Miller Mountain Study Area. The study was expanded to three density study areas and a region wide demographic study area from 1990 through 1996. BLM and Boise personnel monitored the demographic performance on a more opportunistic basis from 1997 through the 2002 field season. We were in the midst of banding juvenile owls when the fire started in mid July.

Other listed species:
The nearest bald eagle nest is 2 **2** miles from the fire perimeter. Eagle foraging opportunities for fish were minimal pre-fire. There are no known wintering roost areas within the fire, but one or two bald eagles winter just above the Elk Creek Dam construction site. Only vagrant-wandering birds would have used the vicinity before the fire, so the impact to bald eagles of the fire is negligible.

The fire is over 50 miles from the coast, so the area is well outside the range of marbled murrelets.

There is no vernal pool habitat within 10 miles of the fire area, so there is no concern here for vernal pool fairy shrimp.

Sensitive Species:

Peregrine Falcon
There are no known falcon nesting cliffs within the fire, but there is a high probability of nesting at cliffs near the fire origin at Timbered Rock. The extent of the fire may alter the balance of avian prey species, but since peregrines prey on a wide array of bird species, the probability of successful nesting should not have been altered by the fire, or by suppression activities. Local peregrine sites at similar elevations fledge around the last week of June, first week of July. Prolonged (two weeks), frequent, and proximal (within **2** mile) use of helicopters during suppression would have bothered the birds, but occurring relatively late in the nesting season, the peregrines would not have abandoned the site.

Northern Goshawk

There have been historic detections of goshawks within the fire perimeter, but no nests or territories have been located. Adjacent watersheds of similar habitat have resident goshawks, so there is a high probability for two to four territories within the burn area. Since Timbered Rock was an LSR, we had not done specific surveys, since no timber sales were planned in the vicinity. The goshawk has been petitioned for federal listing three times in the past 12 years, but US Fish & Wildlife Service has denied the listing each time.

Survey and Manage Species

Red Tree Vole

There had been no RTV surveys within the LSR, but voles are present in the Trail Creek drainage, which is just west of the Elk Creek basin. Voles have also been identified on Prospect Ranger District, east of the fire area. Due to the patchy nature of the fire intensity, it is unknown how many vole sites would have survived the prolonged heat and smoke. It is presumed that voles would not have survived within the intensely burned areas. Voles spend almost all their time in the canopy. If a human climber approaches a nest, a vole may dive out of the tree. Whether RTVs would have bailed out of the canopy and escaped into a burrow during the fire is unknown.

Mollusk

There had been no mollusk surveys within the LSR, but surveys in the adjacent Trail Creek timber sale area to the west detected none of the three snail species we are mandated to look for (Helminthoglypta hertleini, Monadenia chaceana, Pristiloma arcticum crateris).

Great Gray Owl

There had been several historic detections in the LSR, but no resident pairs or nests were located. Presumably the fire, by creating more open habitat, would have improved conditions for great grays, once the prey population (small mammals) recovers. Most of the pre-fire good habitat would have been in the lower elevation areas, especially near the large meadows on the Corps of Engineers adjacent to Elk Creek.

Botany

The responsibilities of the federal agencies include the active management of special status and Survey and Manage species and their habitats, special areas and native plants. The term Aspecial status@ refers collectively to the following protection categories which are used as guidelines for the management of special status species and their habitats:

Threatened, endangered and proposed species (TEP) are those species that have been formally listed by the U.S. Fish and Wildlife Service (USFWS) as endangered or threatened or officially proposed for listing.

State-listed species (SEO, STO) are those plants listed under the Oregon Endangered Species Act. Conservation will be designed to assist the state in achieving its management objectives.

Survey and Manage species were identified by the Northwest Forest Plan (NFP) Record of Decision (ROD), as supplemented by the 2001 Supplemental Environmental Impact Statement (SEIS), as needing special management attention.

Bureau Sensitive (BSO) species are species that the BLM feels might become federal candidates for listing.

Bureau Assessment (BAO) species are those considered by the BLM to be important species to monitor and manage, but not to the same extent as candidate or Bureau Sensitive species.

Bureau Tracking (BTO) and *Medford Watch* (MW) species are not currently special status species, but their locations are tracked during surveys to assess future potential needs for protection.

Threatened & Endangered Plants

The Timbered Rock Fire is outside the known ranges of any Threatened, Endangered or Proposed (TEP) plants. No TEP plants have been discovered in the area during past surveys or incidental encounters.

Special Status and Survey and Manage Plants

Few special status or Survey and Manage plant surveys have been conducted in the Elk Creek LSR. Most surveys that have been completed in the fire area have been for vascular plants only and have mostly been in silviculture units (brushing and pre-commercial thin). A few surveys have also been done for timber sales (1990), purposive fungi surveys (surveys mandated by the NFP and focused on locating specific fungi genera (2001), *Cypripedium fasciculatum* old growth habitat surveys (2000), grazing allotment project surveys (including *Fritillaria gentneri*-focused surveys), and ridge-top fuel-break surveys. Except for the purposive fungi surveys in 2001, no non-vascular plant or fungi surveys have been conducted in the Elk Creek LSR, although habitat exists for several S&M and special status species. The results of those surveys within the fire perimeter and within whole sections that the Timbered Rock fire line passed through are included in Table 1.

Table 1.

Legal	Date/ Project	Acres	Special Status Species	Noxious Weeds
32-1E-5	1998-silviculture	19		CIVU
32-1E-7	1996-silviculture 2001-silviculture	30 27		CIAR, CIVU
	1995-silviculture	48		

32-1E-8	1998-silviculture	17		CIVU, CIAR
32-1E-9	1995-silviculture 1998-silviculture 2001-silviculture	41 94 97	CYMO, SESPP	CIVU
32-1E-11	1995-silviculture 1996-silviculture 1998-silviculture 1999-silviculture	33 36 59 7		CIVU
32-1E-17	1996-silviculture 1998-silviculture 1999-silviculture	36 36 28		CIVU
32-1E-19	1995-silviculture 1998-silviculture	36 62		CIVU

32-1E-29	1996-silviculture 1998-silviculture 1999-silviculture	26 77 49		CIVU, CIAR
32-1E-30	1997-silviculture	43		CIVU
32-1E-31	1997-silviculture 2001-silviculture	54 31		CIVU
32-1E-33 ACE	2002-FRGE survey	25		
32-1E-3	1993-grazing allotment spring development & fencing project 1997-silviculture	5 45		CIVU
33-1E-4	2002-FRGE survey	7		
33-1E-5	1999-silviculture 2001-silviculture	211 20		CIVU, CYSC CESO

ACE land	2002-FRGE survey	15		
33-1E-7	2001-purposive fungi survey	15		
33-1E-16 ACE land	2001-grazing allotment fencing project	20 miles	CYMO**	
33-1E-18	1998-ridge-top fuel break	.2 mile		

32-1W-1 Forest Svc/Roseburg BLM	2000-powerline brushing survey (by Forest Service)	unk.	CIEL	
32-1W-13	1995-silviculture	39		CIVU
32-1W-14	1990-timber sale 2002-incidental report during suppression rehab	35	ASBR	CIVU
32-1W-23	1990-timber sale 1995-silviculture 1999-silviculture	85 108 33	ILLA2**	CIVU
32-1W-24	1990-timber sale	20		
32-1W-25	1990-timber sale 1998-silviculture 1999-silviculture	80 122 122		CIVU, CESO
32-1W-26	1999-silviculture 2001-silviculture	14 12		CIVU
32-1W-35	1995-silviculture 1998-ridge-top fuel break 1999-silviculture	72 20 57		CIVU, CIAR
33-1W-1	2000-CYFA old growth habitat	8	CYFA**	

	survey			

33-1W-12	1994-incidental report2000-CYFA old growth habitat survey	18	CYFA**	
TOTALS	ACRES SURVEYED MILES SURVEYED	2174 20.2	6 SPECIES	4 SPECIES

**sites outside fire perimeter

Noxious weeds: CIVU = *Cirsium vulgare* (bull thistle); CIAR = *Cirsium arvense* (Canada thistle); CYSC = *Cytisus scoparius* (scotch broom); CESO = *Centaurea solstitialis* (yellow star thistle);

Special Status plants: CYMO = *Cypripedium montanum* (mountain lady slipper), Bureau Tracking and Survey & Manage C; SESPP = *Sedum spathulifolium* ssp. *purdyi* (Purdy=s stonecrop), Bureau Tracking; FRGE = *Fritillaria gentneri* (Gentner=s fritillary), Federal Endangered; CIEL = *Cimicifuga elata* (tall bugbane), Bureau Sensitive; CYFA = *Cypripedium fasciculatum* (clustered lady slipper), Bureau Sensitive and Survey & Manage C; ASBR = *Aster brickelloides* (brickellbush aster), Bureau Tracking; ILLA = *Iliamna latibracteata* (California wild hollyhock), Bureau Assessment.

The following special status plant species were discovered within the fire perimeter:

Sedum spathulifolium ssp. *purdyi* (BTO) - T32S-R1E-S9. Discovered during silviculture survey in 2001 on a rock outcrop in an early-seral conifer forest with residual 150-year-old overstory trees. Approximately 250 plants in a 50 x 100' area. Usually found in shade to partial shade on rocky slopes and cliffs (Hickman 1993, Knight and Seevers 1992). 1 documented site in the Butte Falls Resource Area (BFRA)/ 21 in the Medford District (MED) as of 6/26/02. The area burned at low intensity.

Cypripedium montanum (BTO, S&M C) - T32S-R1E-S9. Discovered during silviculture survey in 2001 on ridgeline in early-seral conifer forest with residual 150-year-old overstory trees. 8 plants. Typical habitat is in mixed conifer or mixed evergreen/oak woodland plant communities with 60-80%

canopy closure. The role and effects of fire on the species is unknown (USDI, USDA 1998). 57+ sites in BFRA, 190 in MED as of 6/26/02. The area burned at low intensity.

Aster brickelloides (BTO) - T32S-R1W-S14. Discovered in September 2002 during fire rehab work, on the edge of a rocky bluff near a constructed cat road. 5 plants. 1 site in BFRA, 3 in MED, but believed to be common and little detected because it blooms late in the season (Aug-Sep). The area burned at low intensity.

Cimicifuga elata (BSO) - T32S-R1W-S1 on Forest Service and Roseburg BLM. Discovered by the Forest Service during surveys prior to brushing and cutting trees under a power-line. Located on a north-facing moist mature forested slope. Just the east edge of the population was affected by the fire suppression efforts of clearing a landing and clearing a path out to the hand line. A few plants were affected, but may recover in the future. Many plants were observed intact after the fire was controlled. 1 site in BFRA, 76 in MED. The species has been assessed as stable across its range in monitoring studies conducted throughout Oregon in the 1990's (Kaye 2000).

Post-fire monitoring of these known sites should be conducted to determine the detrimental impacts and mitigation measures necessary to reverse such impacts. Monitoring will need to occur during spring months when plants are evident.

The following species are also known from areas surrounding the fire and are likely present within the fire perimeter:

Cypripedium fasciculatum (BSO, S&M C) - known from several sites around the fire. Typical habitat is varied, but usually in moist to dry mixed evergreen forests with heavy duff and filtered sunlight (Knight and Seevers 1992). 66 known sites from BFRA, 546 from MED as of 6/26/02.

Iliamna latibracteata (BAO) - known from several locations west of the fire. Typical habitat is described as moist, often shady places (Knight and Seevers 1992), although some sites where it has been found in the BFRA have been subject to recent disturbance, such as logging and road building. 10 sites known from BFRA/12 in MED as of 6/26/02.

Fisheries

The Elk Creek Watershed is a Tier 1 Key Watershed, which contributes directly to conservation of at-risk salmonid species (USDI 1995). Coho salmon (*Oncorhynchus kisutch*), listed as Athreatened@ under the Endangered Species Act (ESA), are known to inhabit approximately 36 miles of stream within this watershed, including approximately 5 miles located on BLM lands. Critical Habitat has also been designated by National Marine Fisheries Service (NMFS) for this species within the Rogue and Klamath Basins. All fish-bearing streams located below natural (i.e. waterfalls) or human-made (i.e. dams) barriers are considered to be within Critical Habitat for coho salmon. Streams on BLM lands that are known to contain coho salmon are Elk, West Branch Elk, Middle, Flat, Sugar pine, and Hawk Creeks.

Several other resident and anadromous fish species also inhabit the Elk Creek watershed, including steelhead, rainbow, and cutthroat trout, redside shiners, speckled dace, and sculpin species.

The Timbered Rock Fire burned approximately 11,800 acres of BLM lands. Burn severity ranged from light to extreme. In many areas the riparian under story vegetation and tree canopy remained intact and will still provide shade to the stream and future large wood recruitment. However, there has been complete removal by fire of overstory canopy on many stream reaches, which will require replanting, and additional stabilization treatments, such as check dam construction and large wood placement for sediment retention. This is particularly important on coho salmon-bearing streams to reduce adverse effects of increased sediment on spawning habitat. Stream reaches which pose the greatest concern and risk to coho include Timber Creek T32S R1E Section 9, Flat Creek T32S R1E Sections 19 and 29, Middle Creek T32S R1E Sections 29 and 33, and West Branch Elk Creek T33S R1E Section 7 and T33S R1W Sections 1 and 12. Although large wood is abundant in West Branch Elk Creek due to falling of hazard trees and burning snags into the creek during fire suppression activities, the other stream reaches are lacking substantial amounts of large wood, which would form, debris jams for sediment retention. Timber Creek, while not known to contain coho salmon, is located within designated Critical Habitat for coho and has the potential to contribute major amounts of sediment to coho-bearing streams, which are immediately downstream of this reach

EFFECTS OF ALTERNATIVES

Alternative No Action

Vegetation & Grazing

Soil erosion, loss of soil productivity, and sedimentation are expected to be greater if no rehabilitation/stabilization activities are implemented on the fire area in the short term. A greater possibility of noxious weed invasion on the fire area is likely with the no action alternative. A change in the conifer component of the ecosystem is probable if conifers are not planted on the fire area. Recovery of the riparian areas will be slower with the no action alternative. Stream channels are more subject to deterioration with no action.

Riparian

Rehabilitation/stabilization activities on the Timbered Rock Fire would not occur. It is anticipated the intensely burned areas that have lost their seed bank would revegetate slower and the rate of floristic succession would be slower. Invading weeds and non-natives are expected to invade, become established and expand at a high rate in areas with little or no competition from native plants and forbs. Weeds are established along roads throughout the fire area and quickly expand into any newly disturbed areas. Fire lines, staging areas and other ground disturbing activities would not be seeded and weatherized. Riparian areas would recover at the natural succession rate, which may be delayed or altered due to the severity of the fire in same drainages

Fisheries

The No Action alternative would allow stream degradation to occur at a higher rate than if the proposed stabilization projects were implemented. No instream wood, check dams, culvert replacements, road weatherization, seeding of native grasses, or riparian and upland planting would occur. This would result in increased mobility of sediment, increased stream temperatures due to absence of tree canopy shading, increased scour of stream banks and substrate related to higher peak flows, increased risk of culvert failure and road washouts, reduced salmon egg fecundity, and a reduction in juvenile salmonid survival

Determination of Effects on Southern Oregon/Northern California (SONC) Coho Salmon, SONC Critical Habitat, and Essential Fish Habitat from Implementation of Alternative 1:

May Affect, Likely to Adversely Affect

The No Action Alternative is expected to result in more than a negligible chance of Atake@ of this species. As a result, the No Action Alternative is considered Alikely to adversely affect@ SONC coho salmon (listed Athreatened@), SONC Critical Habitat, and Essential Fish Habitat.

Soils
The direct effect of no soil erosion control or channel stability implementation is anticipated to maintain a high level of risk for soil erosion, and sedimentation of stream channels in the short term (1-5 years). Soil productivity losses could be long term (greater than 5 years) in areas of intense burn.

Hydrology
The No Action Alternative would not implement any emergency stabilization or rehabilitation projects such as check dams, culvert upgrades, instream wood placement or falling, seeding with native/non-native grasses, riparian and upland planting, road maintenance, or road weatherization. By not implementing any or all of these projects, it is expected that there would be an increase in upland and channel erosion and subsequent sedimentation. This would be expected to have a negative impact on water quality and aquatic habitat, as well as posing threats to downstream structures such as culverts and roads.

Wildlife
Northern Spotted Owl.
Much of the emergency rehabilitation has already been completed as fire crews were mopping up in late August. Dozer lines have been water barred and seeded. The main work remaining is installation of straw/fabric check dams for erosion control, some spring tree planting, and felling of dead trees into streams to provide shade and structure and to slow runoff.

The emergency rehab activities would have negligible impact to spotted owls or to suitable owl habitat. The disturbance and alteration occurred during the fire itself. Dozer lines disrupted ground layers of suitable habitat, but the later erosion control work was no additional habitat change. Native grass seeding and water bars will help the bare ground become revegetated sooner. Burnout ignition to stop

the fire altered several hundred acres of suitable habitat. Check dam construction in draws in the fall will not disturb surviving owls.

Peregrine Falcon
By September, falcons in SW Oregon are no longer tied to the nesting cliff. At Timbered Rock, the potential nesting cliffs are high in the watershed, and any emergency rehab within **2** mile was already completed by mid September. Further emergency rehab measures should not impact the falcons.

Red Tree Vole
We do not know the effect of the fire on the RTV population, or of how fast they might recolonize the burn area. Emergency rehab work such as seeding, waterbarring, check dams, stream stabilization would have no impact on RTV persistence. The voles eat green conifer needles.

Botany Consultation and Threatened & Endangered Plants
The Timbered Rock Fire is located entirely outside the ranges of any T&E or Proposed plants. No TEP plant sites are known from the fire area and no consultation with USFWS is required. The No Action Alternative would have ANo Effect@ on any TEP plant species.

Special Status and Survey & Manage Plants
Since few botanical surveys have been conducted in the Elk Creek LSR, it is not known how many special status or survey and manage plant populations may have existed within the fire area. However, since past surveys discovered some special status species, it is assumed that there may be more undiscovered populations and species of vascular plants, lichens, bryophytes and fungi.

Many native plants are adapted to fire regimes and some species even depend on fire disturbance for seed germination or for creating openings for regeneration. Many native plants, including some special status species, will probably recover naturally over time in areas that burned at low intensity and perhaps even at moderate intensity. In areas that burned at high intensity, there is a possibility that special status perennial bulbs or roots and seed stored in the soil may have been destroyed by the flames and/or heat of the fire. In mature stands that were severely burned, canopy removal, potential soil erosion and subsequent invasion by non-native plant species could hinder the re-establishment and survival of special status species that might recover from the fire. The Ano treatment@ alternative would not implement erosion control strategies and native vegetation plantings. The short-term effects of this alternative may have less direct impact to special status plants, if present, but the long-term effects could negatively affect the recovery of suitable habitat for native and special status plant species.

Effects of the Rehabilitation and Stabilization Alternative (Action)

Botany
Consultation and Threatened & Endangered Plants
The Timbered Rock Fire is located entirely outside the ranges of any T&E or Proposed plants. No TEP plant sites are known from the fire area and no consultation with USFWS is required prior to

implementing the Stabilization and Rehabilitation Alternative. This alternative would have ANo Effect@ on TEP plant species.

Special Status and Survey & Manage Plants

Since few botanical surveys have been conducted in the Elk Creek LSR, it is not known how many special status or survey and manage plant species or populations may have existed within the fire area. However, since past surveys discovered some special status species, it is assumed that there may be more undiscovered populations and species of vascular plants, lichens, bryophytes and fungi within the fire area.

Ground disturbance and habitat alteration has already occurred in the Timbered Rock Fire in the form of the fire itself and the fire suppression activities. Some vascular plant species will recover by next spring (2003), but lichens and bryophytes will take longer to re-establish. Fungi recovery is unknown. It is less likely that special status plant species will persist or recover on much of the private land in the fire area because post-fire treatment herbicide spraying is planned for several years.

The stabilization and rehabilitation activities proposed under this EA are intended to prevent soil erosion, negative impacts on water quality and fisheries resources, and treat lands unlikely to recover naturally from wild land fire damage or suppression activities. They are aimed at areas that were subject to high intensity fire where most trees were killed and bare soil has been exposed. It is unknown if special status species are present or, if present, survived intense heat or fire. Short-term direct effects of ground disturbing rehabilitation activities like tree planting to special status species could include disturbance, displacement or destruction of individual plants, roots, bulbs or seeds. However, the long-term, more indirect effects of re-establishing native vegetation that resists invasion by non-native noxious weeds and of preventing soil erosion would be beneficial to the recovery of special status plant species and their habitats.

Wildlife

Same as the No Action Alternative

Fisheries

The Stabilization and Rehabilitation alternative would implement emergency stabilization projects including instream wood placement, check dam construction, damaged culvert replacement, road weatherization, seeding of native grasses, and planting of riparian and upland vegetation. These actions will help to reduce the potential for major landslides and mass wasting events, and will provide bank stability, sediment retention, and stream shading on streams, which were severely burned in the fire. Short-term effects would include some sediment mobilization during culvert replacement, but these would be offset by the benefits of increased channel stability and reduced threat of road failure. Large wood placement could possibly cause some minor sediment to be dislodged from the stream banks when the trees fall, but this would be expected to be very minimal. Fish could also be harmed during the falling of trees into the stream. Although there would be some risk of this occurring no matter when the

trees are felled because coho reside year-round in these streams, the benefits of retaining sediment and increasing stream complexity would be expected to outweigh these potential adverse effects.

Determination of Effects on Southern Oregon/Northern California (SONC) Coho Salmon, SONC Critical Habitat, and Essential Fish Habitat from Implementation of the Stabilization and Rehabilitation alternative:
May Affect, Likely to Adversely Affect

The Action Alternative is expected to result in more than a negligible chance of Atake@ of this species. Although these actions can be viewed as beneficial to coho salmon, Critical Habitat, and Essential Fish Habitat, there is a high likelihood that fish may be harmed or harassed during the placement of large wood because they inhabit these streams year-round. As a result, the Action Alternative is considered Alikely to adversely affect@ SONC coho salmon (listed Athreatened@), SONC Critical Habitat, and Essential Fish Habitat. Emergency consultation with the National Marine Fisheries Service (NMFS) was initiated in July, 2002 for SONC coho salmon, SONC Critical Habitat, and Essential Fish Habitat.

Soils
The direct effect of establishing vegetative cover, mulching, fertilizing, sediment dams, and road weatherizing is expected to reduce the potential for runoff, soil erosion, debris deposition in stream channels, and soil productivity losses from the fire.. It is estimated that there could be as much as a 50-70 % reduction in soil erosion and sedimentation from these efforts.

Fertilizer applications are expected to improve soil nutrient availability in areas where the soil organic matter was volatilize from the fire. Applications could be needed every 5 years to maintain adequate soil nutrient availability until background levels could be maintained.

Riparian
Grass seeding in selected areas is expected to speed the recovery of the vegetative community within the burned area and quickly establish an early vegetative component that provides stability and protection to soils and aids in the development of a more robust and diversified vegetative community. The objective is to quickly establish native grass species, along with conifers and other desirable native species, in heavily disturbed areas prone to rapid establishment of brush species and quick invasion of non-native and noxious weed species, to reduce runoff and soil erosion, and to augment the dominance of native species in meadows and openings dominated by non-native species. Noxious weeds, such a star-thistle and scotch-broom are known to occur in the area and enjoy the current conditions of full sun with little competition. Also, it=s likely they were spread during firefighting efforts an equipment.

Additionally, seeding with native grasses is expected to quickly occupy and dominate communities and areas previously dominated by annual grasses and weeds. Annual seed supply has been reduced in many areas by the fire and the proposed seeding of perennial natives provides an opportunity to reestablish native species as the dominant community once again.

Planting and seeding in riparian areas will speed the recovery of the riparian eco-system, reduce soil erosion and in time capture sediments carried in stream. Conifer planting will result in the quick establishment and development of the conifer ecosystem. Without conifer planting, the resulting vegetative community would probably be dominated by brush and hardwood species in many areas. The direct and indirect effects of implementing emergency stabilization and rehabilitation projects would include reducing the amount of erosion, sedimentation, and negative effects on water quality and threat to structures. Erosion would be reduced through grass seeding and planting unstable areas. Projects expected to reduce sedimentation include constructing check dams, falling large wood in stream channels, road maintenance and road weatherization. Culvert upgrading would reduce the risk of culverts plugging with excess debris created by the fire during storm events. These projects are expected to have a positive effect on water quality and stream channels and would also likely reduce the threat to downstream structures. However, if there is a wetter than average winter, these projects would be less effective.

Vegetation
Revegetation with conifers will restore the ecological conditions that existed in the Timbered Rock area prior to the fire. Soils will be protected and better habitat for a variety of wildlife and fish species will occur.

Mitigation Measures and Residual Effects:
Mitigating measures are being proposed under the proposed action. The proposed action will reduce the adverse environmental effects of soil erosion, loss of soil productivity, sedimentation, and invasion of noxious weeds. There would be no long-term residual impacts of the proposed action or for any alternative. No additional measures have been identified as necessary to mitigate impacts.

Monitoring:
Fire lines will be surveyed to determine if noxious weeds have been introduced into the fire area. The survey will consist of walking the fire lines and treating noxious weed species if found. Planted conifers and hardwoods will be surveyed following the first growing season and third growing season to determine the survival levels of the treatment. The surveys will be conducted in accordance with the BLM Oregon State reforestation manual. The survival survey results will be entered into Micro-Storms for record keeping and future treatment recommendations. Additional surveys, if needed, after the third year survey will be funded from the 6320 activity. Sedimentation check dams and fallen dead trees for channel stabilization will be monitored for their effectiveness after the first winter season and three years later. Wildlife and Plant species will be monitored to determine the fire stabilization and rehabilitation projects effects on the appropriate species of concern. The monitoring will be conducted following the

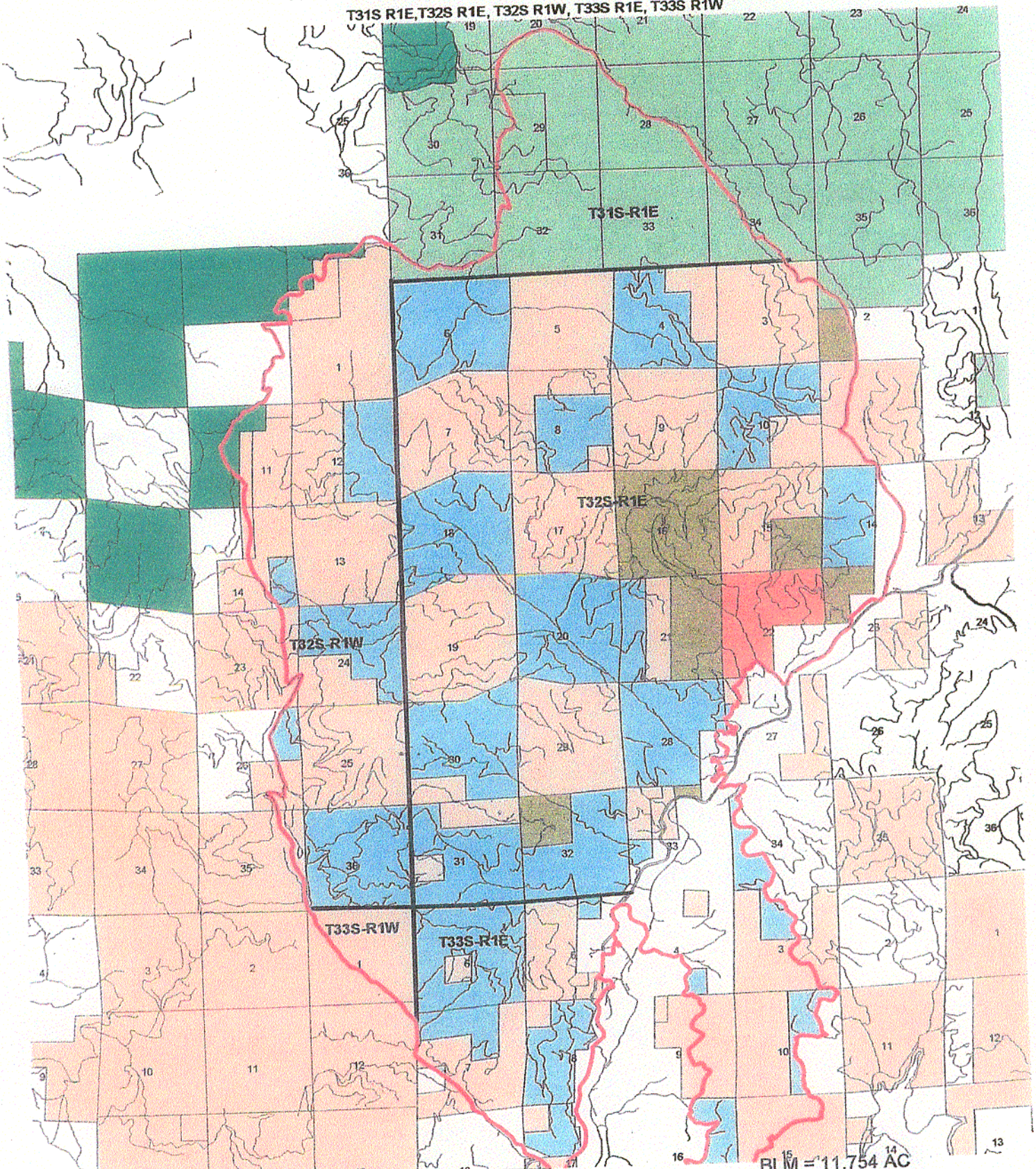
first winter season and the third year. The funding for those monitoring efforts will be derived from operational funding and not from the Emergency Rehabilitation and Stabilization funding.

CONSULTATION and SURVEY & MANAGE:
See plants and wildlife effects of the proposed action above.

PERSONS OR AGENCIES CONSULTED.
This EA was made available for formal public review in October, 2000 by Public Notice. The Army Corp of Engineers are being consulted for determining the proposed activities that may be completed under this EA for treatment of federal lands under their authority.

TIMBERED ROCK FIRE - BUTTE FALLS R.A.

T31S R1E,T32S R1E, T32S R1W, T33S R1E, T33S R1W



FIRE PERIMETER

LAND ADMINISTRATION
- BLM
- ROGUE RIVER NF
- UMPQUA NF

PRIVATE CONTRIBUTORS
- BOISE CASCADE CORP
- INDIAN HILL
- SUPERIOR LUMBER CO

SCALE 1:80,000

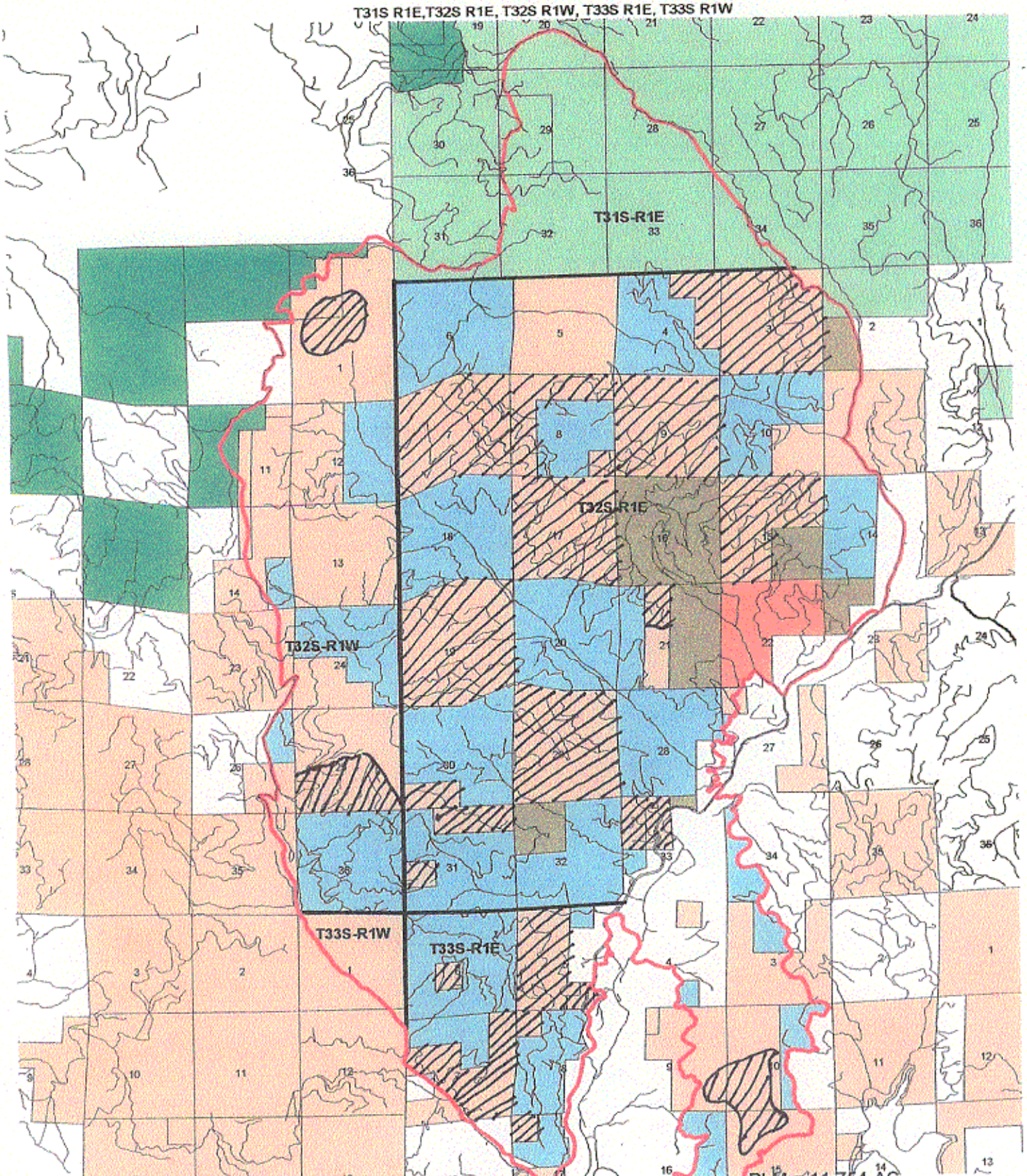
N

BLM = 11,754 AC
RR NF = 2,631 AC
BOISE = 9,088 AC
SUPERIOR = 1,486 AC
INDIAN HILL = 453 AC

8/5/02

TIMBERED ROCK FIRE - BUTTE FALLS R.A.

T31S R1E,T32S R1E, T32S R1W, T33S R1E, T33S R1W



FIRE PERIMETER

LAND ADMINISTRATION
- BLM
- ROGUE RIVER NF
- UMPQUA NF

PRIVATE CONTRIBUTORS
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BLM = 11,754 AC
RR NF = 2,631 AC
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SUPERIOR = 1,486 AC
INDIAN HILL = 453 AC

8/5/02

Areas To be planted 6,600 Acres